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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,489	03/16/2004	Fernando Oliveira	EMS-07301	3655
52427 7590 05/08/2007 MUIRHEAD AND SATURNELLI, LLC 200 FRIBERG PARKWAY, SUITE 1001 WESTBOROUGH, MA 01581			EXAMINER NGUYEN, THAN VINH	
			ART UNIT 2187	PAPER NUMBER
			MAIL DATE 05/08/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/802,489

Applicant(s)

OLIVEIRA ET AL.

Examiner

Than Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3,6-9,15,20,21,27,28,31,34-37,43,51 and 52 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,10-14,16-19,22-26,29,30,32,33,38-42,44-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/27/07 has been entered.
2. This is a response to the amendment, filed 1/26/07.
3. Claims 1-52 are pending.
4. In view of the amendment to claim 37, the previous rejection to his claim under 35 U.S.C. 112, second paragraph, is withdrawn.
5. Claims 3,6-9,15,20,21,27,28,31,34-37, 43, and 51-52 were previously indicated as allowable.

Response to Amendment/Arguments

6. Applicant has amended the previously rejected claims with further limitations. Those claims are addressed below.
7. As to claim 1,22,29,46 Applicant argues Farmer does not teach receiving and journaling write requests to a journal. The Examiner disagrees. Farmer teaches receiving and storing write commands from multiple users and storing the changes associated with these write requests (2/50-60; 4/50-60). Thus, Farmer does teach receiving and storing write requests to a journal.
8. As to claim 22, Applicant argues that Farmer does not teach storing partial journals for write requests. The Examiner disagrees. Farmer teaches receiving and storing write commands

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from multiple users and storing the changes associated with these write requests (2/50-60; 4/50-60).

Claim Rejections - 35 USC§ 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1,2,4,5,10-14,18,19,22-26,29,30,32,33,38-42,46-50 are rejected under 35

U.S.C. 102(e) as being anticipated by Farmer et al (US 7,007,043).

As to claim 1,22,29,46:

11. Farmer teaches a storage backup system that uses journaling. Farmer teaches the claimed method for providing a backup copy comprising:

receiving a write request from one of a plurality of sources (capture write commands from multiple users; 1/45-53; 2/53-55; 4/50-60);

receiving data (3/30-60);

journaling said write request in one of a plurality of journals, each partial journals journal a write request of a different source (store/capture write commands from multiple users/sources; 2/53-55; 4/50-60; journal all changes made; 1/35-40; 2/55-56; 4/24-27,50-65); and

updating said primary storage in accordance with the write request (update/write to primary storage; 3/5-15).

As to claim 2,25,26,30,49,50:

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12. Farmer teaches receiving partial journals having partial journal entries; merging the partial journal entries in accordance with a predetermined merging time period forming a merged partial journal entry for a particular storage location, said merged partial journal entry reflecting application of data modifications for the particular storage location for the predetermined merging time period (reconstruct a particular point-in-time snapshot from stored logs/journals; 4/40-65).

As to claim 4,23,32,47:

13. Farmer teaches each partial journal entry includes a time stamp (abstract; 8/45-47).

As to claim 5,24,33,48:

14. Farmer teaches periodically flushing the journals to a primary journal (write to primary journal; 4/30-31).

As to claim 10,38:

15. Farmer teaches the write request is made with respect to a copy of data included on the primary storage (2/53-56; 3/5-10).

As to claim 11,39:

16. Farmer teaches the primary storage is **one of**: a physical device, logical device, virtual device, and a portion of one or more different devices (3/5-60).

As to claim 12-14,40-42:

17. Farmer teaches each time stamp value is obtained using a phase lock loop processing technique and using actual time values (storing time stamp; Abstract; 3/30-35; 5/5/25; 6/57; Claim 1).

As to claim 18:

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18. Farmer teaches a system comprising:

a switch (point of data entry/input to data appliance 404; Fig. 4) including input ports, each input port being associated with a processor (administrator 408 or client/user 400: Figure 4) and a portion of memory (point-in-time views off 405);

a plurality of partial journals, each partial journal being associated with a unique input port and being stored in the portion of associated memory with that input port, each partial journal including journal entries for write requests received (storing each user write request; 2/50-60; 4/50-65);

a primary journal incorporating portions of the partial journals associated with write requests that occurred earlier in time (merged journal from reconstruction of a particular point-in-time snapshot from stored logs/journals; 4/40-65).

As to claim 19:

19. Farmer teaches a time base (storing journal/log time; abstract; 8/45-47).

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 16,17,44,45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farmer et al (US 7,007,043).

As to claim 16,17,44,45:

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22. Farmer does not specifically disclose the journal and updating are simultaneous and each journal entry includes a validity status. It is well-known in the art to perform functions simultaneously to get the fastest performance and data would be synchronized. One of ordinary skills in the art would readily recognize that simultaneously storing the journal and updating the primary storage would ensure the data in the journal and primary storage are synchronized, ensuring the most accurate and point-in-time snapshot. One skilled in the art would also recognize the importance of having a status of the journal and updating operation to indicate whether it has been completed. Thus, it would have been obvious to one of ordinary skills to performing the journaling and updating simultaneously and use status indicators so that the journal and primary storage are completed and contain the most accurate and synchronized point-in-time snapshot.

Allowable Subject Matter

23. Claims 3,6-9,15,20,21,27,28,31,34-37,43,51, and 52 are allowed for reasons indicated above and in the previous office action.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Than Nguyen whose telephone number is 571-272-4198. The examiner can normally be reached on 8am-3pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Than Nguyen
Primary Examiner
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